

**REMARKS**

The Examiner's careful review and examination of the subject application are noted and appreciated. Upon entry of the present amendment, claims 1 and 3 have been amended, and new claims 20-28 have been added. No new matter has been introduced with this amendment. Support for amended claim 1 can be found in Applicants' original specification (see, for example, page 17, line 18 - page 19, line 19). Claims 3, 7, and 14 have been amended to maintain consistency with claim 1 as amended. Support for new claims 20-28 can be found in Applicants' original specification (see, for example, page 17, line 18 - page 19, line 19). Entry of the present amendment is respectfully requested.

Applicants have carefully reviewed the above-identified Office Action. Applicants submit that, in view of the clarifying remarks set forth herein, all bases of objection and rejection have been overcome. Accordingly, Applicants respectfully request withdrawal of the pending rejections and allowance of the claims submitted.

**AMENDED SPECIFICATION**

The Examiner has indicated "Page 1 of the specification states that the present invention "relates to" an earlier application [and] this statement has no legal effect." Applicants have amended the specification. The present application is a divisional application of, and claims priority to, United States Patent 6,593,024 filed June 20, 2002, which claims priority to United States Provisional Patent Application Number 60/302,131, filed June 29, 2001. The

status of the present application as a Divisional Application of United States Patent Application 10/176,240 (issued as United States Patent 6,593,024) is clearly indicated in the Transmittal Letter accompanying the original filing of the present application. Thus, entry of the amended specification is respectfully requested.

**CLAIM REJECTIONS UNDER 35 U.S.C. §102**

**1. Rejection of claims 1, 6, 11, 12, and 15 under 35 U.S.C. §102(a) as being anticipated by Tanigawa et al. (U.S. Patent Number 6,471,890)**

The Examiner has rejected claims 1, 6, 11, 12, and 15 under 35 U.S.C. §102 as being anticipated by Tanigawa et al. (U.S. Patent Number 6,471,890). Applicants respectfully request reconsideration of the rejection to claims 1, 6, 11, 12 and 15, in view of the current amendment and following remarks.

"A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." (MPEP § 2131). Claim 1 and all claims dependant thereon are not anticipated by Tanigawa in that each and every element of the claim is not expressly or inherently described in the reference.

Tanigawa teaches subjecting the nickel material to two separate oxidation treatments. In each treatment, the nickel material is  $\text{Ni}(\text{OH})_2$  (nickel material comprising a hydroxide group). However, amended claim 1 requires nickel material without hydroxide groups to be reacted in the presence of an oxidizing agent. Therefore, each and every element of claim 1 is not described in the reference.

The oxidation process of Tanigawa is fundamentally different from Applicants' claimed method. Tanigawa teaches a first oxidation treatment in which raw material containing nickel hydroxide solid solution powder is heated in air at 120 C (column 15, lines 53-55). Tanigawa further teaches a second oxidation treatment in which the resultant raw material of the first treatment is subjected to a second oxidation treatment in a solution containing sodium hydroxide and NaClO. (column 15, line 63 – column 16, line 3). Each of the treatments of Tanigawa are surface oxidation treatments of already formed  $\text{Ni}(\text{OH})_2$  particles.

Applicants' claim 1 is not anticipated by surface treatments of already formed active material particles (nickel particles comprising hydroxide), but rather Applicants' claimed invention is directed to an oxidation treatment of active material particles as the active material particles are being formed. Applicants teach, in an exemplary embodiment of the claimed invention, active metal particles formed by combining an ammonium metal complex (e.g., a sulfate solution) with an ammonium ion solution. (page 17, lines 18-30). The solutions are combined and thus, the active material particles are formed in the presence of an oxidizing agent, thereby allowing oxidation of the active material as the particles are gradually grown. (page 17, lines 23-24). In contrast to the process taught in Tanigawa, Applicants' claimed method permits the core, bulk and surface of the particles to be oxidized to a predetermined degree. (page 18, lines 1-2).

Therefore, Applicants respectfully submit that Applicants' independent claim 1 along with claims 6, 11, 12, and 15 which are dependant upon claim 1 are not anticipated by Tanigawa. Applicants respectfully request the removal of the anticipation rejection to claims 1, 6, 11, 12, and 15.

**2. Rejection of claims 1, 6, 11, 13, and 15 as being anticipated by 35 U.S.C. §102(b) as being anticipated by Bogauchi et al. (U.S. Patent Number 5,489,314)**

The Examiner has rejected claims 1, 6, 11, 13, and 15 under 35 U.S.C. §102(b) as being anticipated by Bogauchi et al. (U.S. Patent Number 5,489,314). Applicants respectfully request reconsideration of the rejection to claims 1, 6, 11, 13 and 15, in view of the current amendment and following remarks.

"A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." (MPEP § 2131). Claim 1 and all claims dependant thereon are not anticipated by Bogauchi in that each and every element of the claim is not expressly or inherently described in the reference.

Bogauchi teaches subjecting nickel hydroxide substrate (nickel material comprising a hydroxide group) to an oxidation treatment. (column 3, lines 10-57). However, amended claim 1 requires nickel material without hydroxide groups to be reacted in the presence of an oxidizing agent. Therefore, each and every element of claim 1 is not described in the reference.

The oxidation process of Bogauchi is fundamentally different from

Applicants' claimed method. Bogauchi teaches first making a substrate comprising nickel hydroxide (see first through sixth manufacturing methods in column 3, lines 10-57) and then subjecting the substrate comprising nickel hydroxide to an oxidation treatment. The treatments described in Bogauchi are surface oxidation treatments of substrates comprising already formed  $\text{Ni}(\text{OH})_2$  particles.

Applicants' claim 1 is not anticipated by surface treatments of already formed active material particles (nickel particles comprising hydroxide), but rather Applicants' claim is directed to an oxidation treatment of active material particles as the active material particles are being formed. Applicants teach, in an exemplary embodiment of the claimed invention, active metal particles formed by combining an ammonium metal complex (e.g., a sulfate solution) with an ammonium ion solution. (page 17, lines 18-30). The solutions are combined and thus, the active material particles are formed in the presence of an oxidizing agent, thereby allowing oxidation of the active material as the particles are gradually grown. (page 17, lines 23-24). In contrast to the process taught in Bogauchi, Applicants' claimed method permits the core, bulk and surface of the particles to be oxidized to a predetermined degree (page 18, lines 1-2).

Therefore, Applicants respectfully submit that Applicants' independent claim 1 along with claims 6, 11, 13, and 15 which are dependant upon claim 1 are not anticipated by Bogauchi. Applicants respectfully request the removal of the anticipation rejection to claims 1, 6, 11, 13, and 15.

3. **Rejection of claims 1, 3, 6, 11, 12, 13, and 15 as being anticipated by 35 U.S.C. §102(b) as being anticipated by Ovshinsky et al. (U.S. Patent Number 5,523,182)**

The Examiner has rejected claims 1, 3, 6, 11, 13, and 15 under 35 U.S.C. §102(b) as being anticipated by Ovshinsky et al. (U.S. Patent Number 5,523,182). Applicants respectfully request reconsideration of the rejection to claims 1, 3, 6, 11, 13, and 15, in view of the current amendment and following remarks.

"A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." (MPEP § 2131). Claim 1 and all claims dependant thereon are not anticipated by Ovshinsky in that each and every element of the claim is not expressly or inherently described in the reference.

Ovshinsky teaches subjecting formed nickel hydroxide to an oxidation treatment. (column 23, lines 4-27). However, amended claim 1 requires nickel material without hydroxide groups to be reacted in the presence of an oxidizing agent. Therefore, each and every element of claim 1 is not described in the reference.

The oxidation process of Ovshinsky is fundamentally different from Applicants' claimed method. Ovshinsky teaches first making modified nickel hydroxide particles by precipitation of divalent cobalt hydroxide onto nickel hydroxide particles (column 22, lines 20-25) and subsequently oxidizing the

particles by stirring the particles in air over night (column 23, lines 10-14). The process described in Ovshinsky is a surface oxidation treatment of formed  $\text{Ni}(\text{OH})_2$  particles.

Applicants' claim 1 is not anticipated by surface treatments of already formed active material particles (nickel particles comprising hydroxide), but rather Applicants' claim is directed to an oxidation treatment of active material particles as the active material particles are being formed. Applicants teach, in an exemplary embodiment of the claimed invention, active metal particles formed by combining an ammonium metal complex (e.g., a sulfate solution) with an ammonium ion solution. (page 17, lines 18-30). The solutions are combined and thus, the active material particles are formed in the presence of an oxidizing agent, thereby allowing oxidation of the active material as the particles are gradually grown. (page 17, lines 23-24). In contrast to the process taught in Ovshinsky, Applicants' claimed method permits the core, bulk and surface of the particles to be oxidized to a predetermined degree (page 18, lines 1-2).

Therefore, Applicants respectfully submit that Applicants' independent claim 1 along with claims 3, 6, 11, 13, and 15 which are dependant upon claim 1 are not anticipated by Ovshinsky. Applicants respectfully request the removal of the anticipation rejection to claims 1, 3, 6, 11, 13, and 15.

**4. Rejection of claims 1, 6, 11, 12, and 13 under 35 U.S.C. §102(b) as being anticipated by Baba et al. (U.S. Pat. No. 5,702,762)**

The Examiner has rejected claims 1, 6, 11, 12, and 13 under 35 U.S.C. §102(b) as being anticipated by Baba et al. (U.S. Patent Number 5,702,762). Applicants respectfully request reconsideration of the rejection to claims 1, 6, 11, 12, and 13, in view of the current amendment and following remarks.

"A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." (MPEP § 2131). Claim 1 and all claims dependant thereon are not anticipated by Baba in that each and every element of the claim is not expressly or inherently described in the reference.

Baba teaches subjecting formed nickel hydroxide to an oxidation treatment. (see for example, column 4, lines 17-39). However, amended claim 1 requires nickel material without hydroxide groups to be reacted in the presence of an oxidizing agent. Therefore, each and every element of claim 1 is not described in the reference.

The oxidation process of Baba is fundamentally different from Applicants' claimed method. Baba teaches spraying sodium hydroxide aqueous solution on the surface of nickel hydroxide particles dispersed in a fluidized granulator with cobalt hydroxide precipitate disposed thereon. The sodium hydroxide aqueous solution which has been uniformly dispersed on the nickel hydroxide particles reacts with the hot air, and as a result, the cobalt hydroxide precipitate has a larger oxidation number. (See column 4 lines 17-39). The process described in Baba is a surface oxidation treatment of formed  $\text{Ni}(\text{OH})_2$  particles.



Applicants' claim 1 is not anticipated by surface treatments of already formed active material particles (nickel particles comprising hydroxide), but rather Applicants' claim is directed to an oxidation treatment of active material particles as the active material particles are being formed. Applicants teach, in an exemplary embodiment of the claimed invention, active metal particles formed by combining an ammonium metal complex (e.g., a sulfate solution) with an ammonium ion solution. (page 17, lines 18-30). The solutions are combined and thus, the active material particles are formed in the presence of an oxidizing agent, thereby allowing oxidation of the active material as the particles are gradually grown. (page 17, lines 23-24). In contrast to the process taught in Baba, Applicants' claimed method permits the core, bulk and surface of the particles to be oxidized to a predetermined degree (page 18, lines 1-2).

Therefore, Applicants respectfully submit that Applicants' independent claim 1 along with claims 6, 11, 12, and 13 which are dependant upon claim 1 are not anticipated by Baba. Applicants respectfully request the removal of the anticipation rejection to claims 1, 6, 11, 12, and 13.

5. **Rejection of claims 1, 6-9, 12, and 13 under 35 U.S.C. §102(b) as being anticipated by Sakamoto et al. (U.S. Pat. No. 6,153,334)**

The Examiner has rejected claims 1, 6-9, 12, and 13 under 35 U.S.C. §102(b) as being anticipated by Sakamoto et al. (U.S. Patent Number 5,702,762). Applicants respectfully request reconsideration of the rejection to

claims 1, 6, 11, 12, and 13, in view of the current amendment and following remarks.

"A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." (MPEP § 2131). Claim 1 and all claims dependant thereon are not anticipated by Sakamoto in that each and every element of the claim is not expressly or inherently described in the reference.

Sakamoto teaches subjecting formed nickel hydroxide to an oxidation treatment. (see column 10, lines 10-39). However, amended claim 1 requires nickel material without hydroxide groups to be reacted in the presence of an oxidizing agent. Therefore, each and every element of claim 1 is not described in the reference.

The oxidation process of Sakamoto is fundamentally different from Applicants' claimed method. Sakamoto teaches preparing a mixed aqueous solution containing  $\text{NiSO}_4$ ,  $\text{MnSO}_4$ , an aqueous  $\text{NaOH}$  solution and an aqueous  $\text{NH}_3$ . Further, Argon is feed as the components are mixed to remove potential oxidants from the solution. Subsequently, a suspension obtained by overflowing is collected and subjected to decantation to separate the precipitate. This precipitate is washed with water and then the metal oxide powders in the state of being moisturized with water are kept in the air, thereby subjecting the powders to an oxidation treatment. The process described in Sakamoto is a surface oxidation treatment of formed  $\text{Ni(OH)}_2$  particles.

Applicants' claim 1 is not anticipated by surface treatments of already formed active material particles (nickel particles comprising hydroxide), but rather Applicants' claim is directed to an oxidation treatment of active material particles as the active material particles are being formed. Applicants teach, in an exemplary embodiment of the claimed invention, active metal particles formed by combining an ammonium metal complex (e.g., a sulfate solution) with an ammonium ion solution. (page 17, lines 18-30). The solutions are combined and thus, the active material particles are formed in the presence of an oxidizing agent, thereby allowing oxidation of the active material as the particles are gradually grown. (page 17, lines 23-24). In contrast to the process taught in Sakamoto, Applicants' claimed process permits the core, bulk and surface of the particles to be oxidized to a predetermined degree (page 18, lines 1-2).

Therefore, Applicants respectfully submit that Applicants' independent claim 1 along with claims 6-9, 12, and 13 which are dependant upon claim 1 are not anticipated by Sakamoto. Applicants respectfully request the removal of the anticipation rejection to claims 1, 6-9, 12, and 13.

**6. Rejection of claims 1, 6-9, 12, and 13 under 35 U.S.C. §102(e) as being anticipated by Ochiai et al. (PG Publication Number 2004/0241545)**

The Examiner has rejected claims 1, 6-9, 12, and 13 under 35 U.S.C. §102(e) as being anticipated by Sakamoto et al. (PG Publication Number 2004/0241545). However, Applicants submit that Ochiai is not an appropriate reference for use in an anticipation rejection under 35 U.S.C. §102(e).

35 U.S.C. §102(e) requires that a prior art reference be published in an international application under the treaty defined in section 351(a) before the invention by applicant for patent. Applicants' patent claims priority to United States Patent Number 6,593,024, filed June 20, 2002 which claims priority to U.S. Provisional Patent Application Number 60/302,131, filed June 29, 2001. Therefore, Applicants' claimed invention has a priority date of June 29, 2001, which predates the publication date of the Ochiai reference. Thus, Ochiai cannot be used as an anticipatory reference under 35 U.S.C. §102(e).

Therefore, Applicants respectfully submit that Applicants' independent claim 1 along with claims 6-9, 12, and 13 which are dependant upon claim 1 are not anticipated by Ochiai. Applicants respectfully request the removal of the anticipation rejection to claims 1, 6-9, 12, and 13.

#### **CLAIM REJECTIONS UNDER 35 U.S.C. §103**

**7. Rejection of claims 2, 5, 16-19 under 35 U.S.C. §103(a) as obvious in view of Tanigawa et al. (U.S. Patent Number 6,471,890)**

The Examiner has rejected claims 2, 5, 6-19 under 35 U.S.C. §103(a) as being obvious in view of Tanigawa et al. (U.S. Patent Number 6,471,890).

Applicants respectfully request reconsideration of the rejection to claims 2, 5, 6-19, in view of the current amendment and following remarks. In particular, Applicants submit that claim 1 is nonobvious in view of Tanigawa and therefore, claims 2, 5, 6-19 which are dependant upon claim 1, are nonobvious in view of Tanigawa.

To establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974) (MPEP § 2143). Claim 1 and all claims dependant thereon are nonobvious in view of Tanigawa in that all claim limitations are not taught or suggested by the prior art.

Tanigawa teaches subjecting nickel material to two separate oxidation treatments. In each treatment, the nickel material is  $\text{Ni}(\text{OH})_2$  (nickel material comprising a hydroxide group). However, amended claim 1 requires nickel material without hydroxide groups to be reacted in the presence of an oxidizing agent. Therefore, all claim limitations are not taught or suggested by the reference.

The oxidation process of Tanigawa is fundamentally different from Applicants' claimed method. Tanigawa teaches a first oxidation treatment in which raw material containing nickel hydroxide solid solution powder is heated in air at 120 C (column 15, lines 53-55). Tanigawa further teaches a second oxidation treatment in which the resultant raw material of the first treatment is subjected to a second oxidation treatment in a solution containing sodium hydroxide and  $\text{NaClO}$ . (column 15, line 63 – column 16, line 3). Each of the treatments of Tanigawa are surface oxidation treatments of already formed  $\text{Ni}(\text{OH})_2$  particles.

Applicants' claim 1 is nonobvious over the cited reference, which discloses surface treatments of already formed active material particles (nickel particles

comprising hydroxide). Applicants' claim is directed to an oxidation treatment of active material particles as the active material particles are being formed.

Applicants teach, in an exemplary embodiment of the claimed invention, active metal particles formed by combining an ammonium metal complex (e.g., a sulfate solution) with an ammonium ion solution. (page 17, lines 18-30). The solutions are combined and thus, the active material particles are formed in the presence of an oxidizing agent, thereby allowing oxidation of the active material as the particles are gradually grown. (page 17, lines 23-24). In contrast to the process taught in Tanigawa, Applicants' claimed method permits the core, bulk and surface of the particles to be oxidized to a predetermined degree (page 18, lines 1-2).

Therefore, Applicants respectfully submit that Applicants' independent claim 1 along with claims 6, 11, 12, and 15 which are dependant upon claim 1 are nonobvious in view of Tanigawa. Applicants respectfully request the removal of the obviousness rejection to claims 1, 6, 11, 12, and 15.

**8. Rejection of claims 2, 5, 16-19 under 35 U.S.C. §103(a) as obvious in view of Bogauchi et al. (U.S. Patent Number 5,489,314)**

The Examiner has rejected claims 2, 5, 16-19 under 35 U.S.C. §103(a) as being nonobvious in view of Bogauchi et al. (U.S. Patent Number 5,489,314).

Applicants respectfully request reconsideration of the rejection to claims 2, 5, 16-19, in view of the current amendment and following remarks. In particular, Applicants submit that claim 1 is nonobvious in view of Bogauchi and therefore,

claims 2, 5, 16-19 which are dependant upon claim 1, are nonobvious in view of Bogauchi.

"To establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art." *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974) (MPEP § 2143). Claim 1 and all claims dependant thereon are nonobvious in view of Bogauchi in that all claim limitations are not taught or suggested by the prior art.

Bogauchi teaches subjecting nickel hydroxide substrate (nickel material comprising a hydroxide group) to an oxidation treatment. (column 3, lines 10-57). However, amended claim 1 requires nickel material without hydroxide groups to be reacted in the presence of an oxidizing agent. Therefore, all claim limitations of claim 1 are not described in the reference.

The oxidation process of Bogauchi is fundamentally different from Applicants' claimed method. Bogauchi teaches first making a substrate comprising nickel hydroxide (see first through sixth manufacturing methods in column 3, lines 10-57) and then subjecting the substrate comprising nickel hydroxide to an oxidation treatment. The treatment described in Bogauchi are surface oxidation treatments of substrates comprising already formed  $\text{Ni}(\text{OH})_2$  particles.

Applicants' claim 1 is nonobvious over the cited reference, which discloses surface treatments of already formed active material particles (nickel particles comprising hydroxide). Applicants' claim is directed to an oxidation treatment of

active material particles as the active material particles are being formed.

Applicants teach, in an exemplary embodiment of the claimed invention active metal particles formed by combining an ammonium metal complex (e.g., a sulfate solution) with an ammonium ion solution. (page 17, lines 18-30). The solutions are combined and thus, the active material particles are formed in the presence of an oxidizing agent, thereby allowing oxidation of the active material as the particles are gradually grown. (page 17, lines 23-24). In contrast to the process taught in Bogauchi, Applicants' claimed method permits the core, bulk and surface of the particles to be oxidized to a predetermined degree (page 18, lines 1-2).

Therefore, Applicants respectfully submit that Applicants' independent claim 1 along with claims 6, 11, 13, and 15 which are dependant upon claim 1 are nonobvious in view of Bogauchi. Applicants respectfully request the removal of the obviousness rejection to claims 1, 6, 11, 13, and 15.

9. **Rejection of claims 2, 4, 5, 16-19 under 35 U.S.C. §103(a) as obvious in view of Ovshinsky et al. (U.S. Patent Number 5,523,182)**

The Examiner has rejected claims 2, 4, 5, 16-19 under 35 U.S.C. §103(a) as being obvious in view of Ovshinsky et al. (U.S. Patent Number 5,523,182). Applicants respectfully request reconsideration of the rejection to claims 2, 4, 5, 16-19, in view of the current amendment and following remarks. In particular, Applicants submit that claim 1 is nonobvious in view of Ovshinsky and therefore, claims 2, 4, 5, 6-19 which are dependant upon claim 1, are nonobvious in view of



Ovshinsky.

To establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974) (MPEP § 2143). Claim 1 and all claims dependant thereon are nonobvious in view of Ovshinsky in that all elements of the claim is not taught or suggested by the prior art.

Ovshinsky teaches subjecting formed nickel hydroxide to an oxidation treatment. (column 23, lines 4-27). However, amended claim 1 requires nickel material without hydroxide groups to be reacted in the presence of an oxidizing agent. Therefore, all elements of claim 1 is not taught or suggested by the reference.

The oxidation process of Ovshinsky is fundamentally different from Applicants' claimed method. Ovshinsky teaches first making modified nickel hydroxide particles by precipitation of divalent cobalt hydroxide onto nickel hydroxide particles (column 22, lines 20-25) and subsequently oxidizing the particles by stirring the particles in air over night (column 23, lines 10-14). The process described in Ovshinsky is a surface oxidation treatment of formed Ni(OH)<sub>2</sub> particles.

Applicants' claim 1 is nonobvious over the cited reference, which discloses surface treatments of already formed active material particles (nickel particles comprising hydroxide). Applicants' claim is directed to an oxidation treatment of active material particles as the active material particles are being formed.

Applicants teach, in an exemplary embodiment of the claimed invention, active metal particles formed by combining an ammonium metal complex (e.g., a sulfate solution) with an ammonium ion solution. (page 17, lines 18-30). The solutions are combined and thus, the active material particles are formed in the presence of an oxidizing agent, thereby allowing oxidation of the active material as the particles are gradually grown. (page 17, lines 23-24). In contrast to the process taught in Ovshinsky, Applicants' claimed method permits the core, bulk and surface of the particles to be oxidized to a predetermined degree (page 18, lines 1-2).

Therefore, Applicants respectfully submit that Applicants' independent claim 1 along with claims 2, 4, 5, 16-19 which are dependant upon claim 1 are nonobvious over Ovshinsky. Applicants respectfully request the removal of the obviousness rejection to claims 2, 4, 5, 16-19.

**10. Rejection of claims 2, 5, 16-19 under 35 U.S.C. §103(a) as obvious in view of Baba et al. (U.S. Patent Number 5,702,762)**

The Examiner has rejected claims 2, 5, 16-19 under 35 U.S.C. §103(a) as being obvious in view of Baba et al. (U.S. Patent Number 5,702,762). Applicants respectfully request reconsideration of the rejection to claims 2, 5, 16-19, in view of the current amendment and following remarks. In particular, Applicants submit that claim 1 is nonobvious in view of Baba and therefore, claims 2, 5, 16-19 which are dependant upon claim 1, are nonobvious in view of Baba.

To establish *prima facie* obviousness of a claimed invention, all the claim

limitations must be taught or suggested by the prior art. *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974) (MPEP § 2143). Claim 1 and all claims dependant thereon are nonobvious in view of Baba in that all claim limitations of the claim is not taught or suggested by the prior art.

Baba teaches subjecting formed nickel hydroxide to an oxidation treatment. (see for example, column 4, lines 17-39). However, amended claim 1 requires nickel material without hydroxide groups to be reacted in the presence of an oxidizing agent. Therefore, all claim limitations of claim 1 is not described in the reference.

The oxidation process of Baba is fundamentally different from Applicants' claimed method. Baba teaches spraying sodium hydroxide aqueous solution sprayed on the surfaces of the nickel hydroxide particles with cobalt hydroxide precipitate thereon dispersed in a fluidized granulator. The sodium hydroxide aqueous solution which has been uniformly dispersed on the nickel hydroxide particles reacts with the hot air, and as a result, the cobalt hydroxide precipitate over the surfaces has a larger oxidation number. (See column 4 lines 17-39). The process described in Baba is a surface oxidation treatment of formed  $\text{Ni}(\text{OH})_2$  particles.

Applicants' claim 1 is nonobvious over the cited reference, which discloses surface treatments of already formed active material particles (nickel particles comprising hydroxide). Applicants' claim is directed to an oxidation treatment of active material particles as the active material particles are being formed.

Applicants teach, in an exemplary embodiment of the claimed invention, active metal particles formed by combining an ammonium metal complex (e.g., a sulfate solution) with an ammonium ion solution. (page 17, lines 18-30). The solutions are combined and thus, the active material particles are formed in the presence of an oxidizing agent, thereby allowing oxidation of the active material as the particles are gradually grown. (page 17, lines 23-24). In contrast to the process taught in Baba, Applicants' claimed method permits the core, bulk and surface of the particles to be oxidized to a predetermined degree (page 18, lines 1-2).

Therefore, Applicants respectfully submit that Applicants' independent claim 1 along with claims 2, 5, 16-19 which are dependant upon claim 1 are ~~nonobvious over Baba. Applicants respectfully request the removal of the~~ obviousness rejection to claims 2, 5, 16-19.

**11. Rejection of claims 2, 5, 10, 11, 14, 16-19 under 35 U.S.C. §103(a) as obvious in view of Sakamoto et al. (U.S. Patent Number 6,153,334)**

The Examiner has rejected claims 2, 5, 10, 11, 14, 16-19 under 35 U.S.C. §103(a) as being obvious in view of Sakamoto et al. (U.S. Patent Number 5,702,762). Applicants respectfully request reconsideration of the rejection to claims 2, 5, 10, 11, 14, 16-19, in view of the current amendment and following remarks. In particular, Applicants submit that claim 1 is nonobvious in view of Sakamoto and therefore, claims 2, 5, 10, 11, 14, 16-19, which are dependant upon claim 1, are nonobvious in view of Sakamoto.

To establish *prima facie* obviousness of a claimed invention, all the claim

limitations must be taught or suggested by the prior art. *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974) (MPEP § 2143). Claim 1 and all claims dependant thereon are nonobvious in view of Sakamoto in that all claim limitations are not taught or suggested by the prior art.

Sakamoto teaches subjecting formed nickel hydroxide to an oxidation treatment. (see column 10, lines 10-39). However, amended claim 1 requires nickel material without hydroxide groups to be reacted in the presence of an oxidizing agent. Therefore, all claim limitations are not taught or suggested by the reference.

The oxidation process of Sakamoto is fundamentally different from Applicants' claimed method. Sakamoto teaches preparing a mixed aqueous solution containing  $\text{NiSO}_4$ ,  $\text{MnSO}_4$ , an aqueous  $\text{NaOH}$  solution and an aqueous  $\text{NH}_3$ . Further, Argon is feed as the components are mixed to remove potential oxidants from the solution. Subsequently, a suspension obtained by overflowing is collected and subjected to decantation to separate the precipitate. This precipitate is washed with water and then the metal oxide powders in the state of being moisturized with water are kept in the air, thereby subjecting the powders to an oxidation treatment. The process described in Sakamoto is a surface oxidation treatment of formed  $\text{Ni}(\text{OH})_2$  particles.

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Applicants teach, in an exemplary embodiment of the claimed invention, active metal particles formed by combining an ammonium metal complex (e.g., a sulfate solution) with an ammonium ion solution. (page 17, lines 18-30). The solutions are combined and thus, the active material particles are formed in the presence of an oxidizing agent, thereby allowing oxidation of the active material as the particles are gradually grown. (page 17, lines 23-24). In contrast to the process taught in Sakamoto, Applicants' claimed process permits the core, bulk and surface of the particles to be oxidized to a predetermined degree (page 18, lines 1-2).

Therefore, Applicants respectfully submit that Applicants' independent claim 1 along with claims 2, 5, 10, 11, 14, 16-19 which are dependant upon claim 1 are nonobvious in view of Sakamoto. Applicants respectfully request the removal of the obviousness rejection to claims 1, 2, 5, 10, 11, 14, 16-19.

**12. Rejection of claims 2, 5, 14 16-19 under 35 U.S.C. §103(a) as obvious in view of Ochiai et al. (PG Pub No. 2004/0241545)**

The Examiner has rejected claims 1, 6-9, 12, and 13 under 35 U.S.C. §103(a) as being obvious in view of Ochiai et al. (PG Publication Number 2004/0241545). However, Applicants submit that Ochiai is not an appropriate reference for use rejection under 35 U.S.C. § 103(a) (based on 35 U.S.C. §102(e)).

35 U.S.C. §102(e) requires that a prior art reference be published in an

international application under the treaty defined in section 351(a) before the invention by applicant for patent. Applicants patent claims priority to United States Patent Number 6,593,024, filed June 20, 2002 which claims priority to U.S. Provisional Patent Application Number 60/302131, filed June 29, 2001. Therefore, Applicants' claimed invention has a priority date of June 29, 2001, which predates the publication date of the Ochiai reference. Thus, Ochiai cannot be used as a reference to determine patentability under 35 U.S.C. §103(a).

Therefore, Applicants respectfully submit that Applicants' independent claim 1 along with claims 6-9, 12, and 13 which are dependant upon claim 1 are nonobvious in view of Ochiai. Applicants respectfully request the removal of the obviousness rejection to claims 1, 6-9, 12, and 13.

#### **PATENTABILITY OF NEW CLAIMS 20 – 28 OVER CITED REFERENCES**

In view of the above remarks, Applicant respectfully maintains that new claims 20 – 28 are patentable over the cited references (Tanigawa et al., Bogauchi et al., Ovshinsky et al., Baba et al., and Sakamoto et al.). The cited references teach methods of reacting previously formed nickel hydroxide materials with an oxidizing agent to form an active nickel material, but fail to teach the formation of a nickel hydroxide or other nickel active material in the first instance in the presence of an oxidizing agent. Applicant's new claim 20 teaches a method for forming an active nickel material that involves a reaction of a nickel-containing reactant with a second reactant, where the second reactant is a

reactant that is incapable of oxidizing the nickel-containing reactant. According to Applicant's new claim 20, the reaction of the nickel-containing reactant with the non-oxidizing reactant occurs in the presence of an oxidizing agent. The cited references fail to teach a reaction of a nickel-containing material with a non-oxidizing reactant and instead teach only a reaction of a nickel-containing material with an oxidizing reactant to form an active nickel material. Accordingly, Applicant believes that new claims 20-28 are allowable over the cited references.



**SUMMARY**

The remaining claims in the application are claims 1-28. In view of the above amendments and remarks, Applicant believes that the rejection of Claims 1 – 19 has been overcome and that these claims, along with new claims 20-28, are allowable over the references cited by the Examiner. Applicant respectfully requests withdrawal of all outstanding rejections and respectfully submits that the application stands in condition for allowance. If the Examiner has any questions or suggestions regarding this amendment, the Examiner is respectfully asked to contact Applicant's representative at the telephone number or email address listed below.

Respectfully submitted,



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